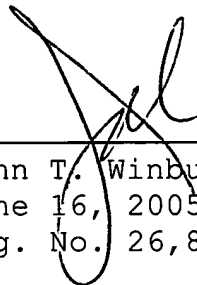


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CERTIFICATION OF ATTACHED ENGLISH TRANSLATION OF PCT  
APPLICATION:

PCT/EP2003/013781 BASED ON DE 102 59 758.8, Filed 12/19/2002

I hereby certify the English translation attached is a true  
and accurate copy of the referenced PCT/EP2003/013781  
application.



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HOUSING FOR AN EXTRACTOR HOOD AND VENTILATOR HOUSING

The present invention relates to a housing for an extractor hood, especially for a flat screen hood, and a ventilator container for a ventilation device of an extractor hood, especially for at least one fan.

In extractor hoods ventilator devices, especially fans are provided to establish a flow in the extractor hood which serves to extract vapour and steam which can be produced for example during cooking. The ventilation devices are accommodated in ventilator containers, especially in ventilator housings, for example, in the form of spiral housings. For this purpose the ventilator container, which can be affixed to a base plate, generally has a suction opening which, in the presence of a base plate, extends through said base plate, and an outlet opening which is provided on the top of the ventilator container in the case of vertically constructed radial fans.

A housing is provided on extractor hoods to guide the vapour and steam to be removed to the suction opening of the ventilator container. This housing together with the base plate, for example, can create a guide channel for the air to be removed to the suction opening of the ventilator container. Furthermore, the housing of the extractor hood generally serves to accommodate the ventilator container to avoid contamination of the container or of lines running to or from the container.

Housings of extractor hoods generally consist of a plurality of individual parts which are joined together by means of screw connections for example. The individual parts of the housing generally comprise a cover, which can have an opening for the outlet opening of the ventilator

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container, as well as two side walls, a rear wall and a front cover.

The disadvantage of this known structure of housings for  
5 extractor hoods is that as a result of the necessary  
screwing and the large number of individual parts, assembly  
is difficult and in addition, increased costs are incurred  
during the manufacture of the individual parts and the  
assembly.

10 It is thus the object of the present invention to provide a  
housing for an extractor hood and a ventilator container  
for a ventilation device of an extractor hood which can be  
manufactured simply and inexpensively and allows simple and  
15 inexpensive mounting and dismounting of these parts and  
therefore the extractor hood.

The present invention is based on the knowledge that at  
least individual parts of the housing of the ventilator  
20 container can fulfil several functions.

The object of the present invention is solved according to  
a first aspect by a housing for an extractor hood, wherein  
the extractor hood comprises at least one ventilator  
25 container and the housing serves as housing for at least  
part of the ventilator container. The housing is  
characterised in that one section of an external wall of  
the housing is formed by a part of the ventilator  
container.

30 The ventilator housing in which one or a plurality of fans  
of an extractor hood are running is designated as the  
ventilator container in the sense of this invention. Such  
ventilator containers can thus be, for example, the housing  
35 of a radial fan, a spiral fan housing or the like.

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The housing of the extractor hood is understood in the sense of this invention as the housing which accommodates the ventilator container at least partly and which  
5 therefore serves at least to cover part of the ventilator container and optionally further elements, such as cables for example. The housing can further serve to form the compartment in which the vapour and steam to be removed to a suction opening of the ventilator container is guided. By  
10 using a part of the ventilator container as a section of an external wall of the housing, it is not necessary to use a separate housing part for this section. The number of individual parts of the housing and their size can thus be reduced whereby the manufacturing and assembly costs can  
15 also be reduced.

The section of the external wall of the housing formed by a part of the ventilator container advantageously forms a section of the top of the housing. The area which needs to  
20 be covered by a separate cover of the housing can hereby be minimised and the provision of a separate cover can optionally be completely omitted.

Especially in areas where no further devices are provided  
25 on the ventilator container, the ventilator container itself can serve as part of the housing for the extractor hood. Especially in the area around the outlet connecting piece forming the outlet opening of the ventilator container, the outside of the ventilator container can be  
30 used as part of the housing. The outlet connecting piece must in any case project out from the housing for the extractor hood for the connection with a waste air pipe or for the inlet into a waste air shaft so that the area around the outlet connecting piece of the ventilator

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container can simply be used as a section of the top of the housing for the extractor hood.

5 The part of the ventilator container forming a section of an external wall of the housing advantageously has the form of a plate. In the sense of this invention a part of the ventilator container which has a substantially flat surface is designated as a plate. Using such an area of the ventilator container as part of the housing for an  
10 extractor hood can ensure a smooth surface of the housing of the extractor hood which is especially important in relation to the deposition of impurities. The plate is preferably formed in one part with the ventilator container.

15 According to a preferred embodiment, the housing comprises two side walls and at least one part of one of the side walls forms a section of the top of the housing.

20 By configuring at least one of the side walls of the housing such that at the same time this forms at least a part of the top of the housing, the area which needs to be covered by a further component on the surface can be reduced.

25 At least one of the side walls preferably has a bent region at its upper edge. This bent region can be used to form the top of the housing. The bent region is preferably embodied as one part with the side wall. Such a side wall can be  
30 manufactured for example by bending. As a result of this simple manufacture of a side wall which at the same time forms a section of the top of the housing, the manufacturing costs can be reduced compared with a housing where the side wall exclusively forms the side of the

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housing and a cover must be screwed onto the side wall for covering the top.

According to a preferred embodiment, at least a part of the  
5 area of the side wall which forms a section of the top of  
the housing can be brought into engagement with at least  
one region of the ventilator container. As a result of this  
engagement, a form-locking connection is preferably  
achieved between the side wall and the ventilator  
10 container. The engagement of the part of the side wall  
forming a section of the top of the housing, with the  
ventilator container can be accomplished for example by  
inserting this part of the side wall into a groove on the  
ventilator container. The engagement of these two  
15 components produces a connection which can make any  
screwing together of these two components superfluous.

According to a further embodiment, a rear wall of the  
housing can be brought into engagement with the ventilator  
20 container in the area of the top of the housing. In this  
case, also the engagement is preferably a form-locking  
connection which makes it possible to fix the rear wall  
directly on the ventilator container. Screwing the rear  
wall onto a further part of the housing, for example, the  
25 side walls of the housing, can hereby be eliminated.  
Assembly is thus considerably easier. The engagement of the  
rear wall with the ventilator container can be  
accomplished, for example, by means of a bent region  
provided at the rear wall. This bent region can be  
30 embodied, for example, in the form of a flange.

According to a further aspect of the invention, the object  
forming the basis of the invention is solved by a  
ventilator container for a ventilation device of an  
35 extractor hood, especially for at least one fan, wherein

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this has at least one engaging device for a part of the housing for the extractor hood. A simple type of fixing of the housing parts is provided by providing engaging devices for housing parts. In this case, the engaging device  
5 preferably comprises at least one receiving area for a part of a side wall and/or rear wall of the housing.

The ventilator container preferably has at least one plate-shaped area on its top. This plate-shaped area can be used  
10 as a section of the external wall of the housing for the extractor hood. At the same time, the plate-shaped area can constitute at least one part of the engaging device for further housing parts. The plate-shaped area on the ventilator container is preferably configured so that it  
15 extends from the outlet connecting piece of the ventilator container over at least part of the width and depth of the housing for the extractor hood. This plate-shaped area can thus form at least a section of the top of the housing and is embodied in one part with the ventilator container,  
20 which facilitates assembly.

The features and advantages of the housing apply accordingly and as far as is applicable to the ventilator container.  
25

The present invention is described in further detail subsequently with reference to the appended drawings, wherein:

30 Figure 1: shows a perspective view of a housing according to the invention shown from behind,  
Figure 2: shows a perspective view of a ventilator container according to the invention with a side wall of the housing,

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Figure 2a: shows a detailed view of the connection of the side wall and the ventilator container,

Figure 3: shows a perspective view of a ventilator container with a rear wall,

5 Figure 3a: shows a detailed view of the connection of the rear wall with the ventilator container.

The embodiment of the housing for an extractor hood according to the invention shown in Fig. 1 comprises a rear  
10 wall 11, a front cover 13 and two side walls 12. The side walls 12 extend over the total height of the housing 1 and each have a bent area 121 at the upper edge. In the embodiment shown these bent areas 121 form a section of the top of the housing. The further section of the top of the  
15 housing 1 is formed by a part 22 of a ventilator container 2 which is accommodated in the housing 1. In the bent area 121 of the side wall 12, gaps can be provided which, as shown in Figure 1 can serve as the opening for components. In the embodiment shown the gap serves, for example, as the  
20 opening for a receptacle 24 for the mains connection of the ventilation device. This receptacle 24 is thus accessible outside the housing 1 without needing to dismantle parts of the housing 1. The plate-shaped area 22 of a ventilator container 2 which is described in more detail later with  
25 reference to Figures 2 and 3 extends over the depth of the housing as far as the rear wall 11 of the housing 1. Over the width the plate-shaped area 22 extends from the edge of the bent region 121 of one side wall as far as the edge of the bent region 121 of the second side wall 12. In the bent  
30 region 121 of the side wall 12, which extends on the top of the housing 1, the width of the side wall is designed so that this extends from the rear wall 11 to the front cover 13.

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Figure 2 shows a ventilator container 2 according to the invention with a front cover 13 and one of the side walls 12. As can be seen from this figure, the region 22 extends in the form of a flat plate around the outlet connecting piece 21 of the ventilator container 2. On the underside of the plate-shaped region 22 the further container wall of the ventilator container 2 continues at a distance from the edge 221 of the plate-shaped region 22. The edge 221 of the plate-shaped region 22 hereby projects over the container wall 25 which goes over into the container regions 23 for accommodating the ventilator, and a groove is formed. In the embodiment shown as can especially be seen from Figure 2a, the container wall 25 is arranged at an angle to the plate-shaped region 22. However, it is also within the scope of the invention to initially construct the container wall 25 perpendicular to the plate-shaped region 22 and then make it run parallel to the plate-shaped region 22. The groove formed between the container wall 25 and the edge 221 of the plate-shaped region 22 forms a receiving area for the edge of the side wall 12. The side wall 12, especially the bent region 121, can be connected to the ventilator container 2 by inserting in the direction indicated by an arrow in Figure 2a. In addition to this connection by engaging in the groove on the ventilator container 2, the side can additionally be connected to the ventilator container 2 by locating devices. For example, lugs (not shown) can be provided on the edge of the side wall, which can cooperate with openings (not shown) in the area of the edge 221 of the plate-shaped region 22.

As is further deduced from Figure 2, a projection 27 is provided underneath the plate-shaped region 22 on the ventilator housing 2, which extends in the form of a strip perpendicular to the ventilator container 2 and is directed towards the rear wall 11 which is not shown in Figure 2.

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A gap into which a part of the rear wall 11 can be inserted is formed between the upper edge of this projection 27 and the underside of the plate-shaped region 22. The part of  
5 the rear wall 11 which cooperates with the gap between the edge 221 and the projection 27 can, for example, be a flange which can be provided on the rear wall 11, at least in the area of the projection 27.

10 Alternatively, a longitudinal groove, for example, underneath the edge 221 of the plate-shaped region 22, can also be provided as an engaging device for the rear wall 11 on the ventilator container 2, which allows engagement of a flange or another projection of the rear wall 11.

15 As can be seen from Figures 2 and 3, the space for guiding the vapour and steam to the suction openings of the fan container 2 is defined at the front by the front plate 13 and is defined at the top and towards the ventilator  
20 container 2 by a base plate 26.

The present invention is not restricted to the embodiment shown. It is also within the scope of the invention to configure the side walls of the housing so that they extend  
25 over a larger area of the top of the housing than that shown in the figures. The bent regions of the side walls can, for example, extend as far as the outlet connecting piece of the ventilator container. In this case, a groove can be provided on the outlet connecting piece into which  
30 the edge of the side wall can engage, which in this embodiment then has a corresponding gap for the outlet connecting piece.

Alternatively it is likewise possible to configure the  
35 ventilator container so that a plate-shaped region extends

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substantially over the entire width of the housing from the outlet connecting piece of the ventilator container. Side walls having the form of a flat wall and merely comprising a narrow flange at the upper edge can then be connected to  
5 this broad plate-shaped region.

The engaging means for engagement of the housing parts with the ventilator container are not restricted to the designs shown. It is also possible to provide a groove at the edges  
10 of the bent areas of the side walls into which a plate-shaped region of the ventilator container can engage for example. Likewise, a groove can be provided on the rear wall which can cooperate with a plate-shaped region in the same way. In addition to or alternatively to providing  
15 grooves for inserting parts, locating devices can be provided at the connecting points between the ventilator container and side wall or rear wall, for example, in the form of lugs and openings or clips.

20 Thus, especially when integrating parts of the cover into the ventilator container, the present invention only requires two side walls which form the cover together with the ventilator container. Thus, the provision of a separate cover part can be omitted. Screwing side parts to a cover  
25 is also no longer necessary. The present invention therefore considerably reduces the assembly time for the housing of the extractor hood and therefore the entire extractor hood. The number of parts required to assemble the housing is furthermore reduced since a separate cover  
30 part can be omitted. Finally, screws are saved since these can be superfluous for connecting the side walls to the ventilator housing to form the top and for connecting the side sections to the rear wall.